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| APPLICATION NO. FILING DATE |          | LING DATE  | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |  |  |
|-----------------------------|----------|------------|----------------------|--------------------------|------------------|--|--|
| 09/839,186 04/19/2001       |          | 04/19/2001 | Matthew L. Meyerson  | 7032/2002                | 1540             |  |  |
| 29933                       | 7590     | 11/29/2004 |                      | EXAM                     | EXAMINER         |  |  |
| PALMER &                    |          |            | ALLEN, MA            | ALLEN, MARIANNE P        |                  |  |  |
| KATHLEEN                    |          |            | ART UNIT             | PAPER NUMBER             |                  |  |  |
| BOSTON, I                   | MA 02199 | 9          | 1631                 | 1631                     |                  |  |  |
|                             |          |            |                      | DATE MAIL ED. 11/20/2004 |                  |  |  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|   |  | Application No.   |   | Applicant(s)  |             |  |  |  |  |  |
|---|--|---|---|---|-------------|--|--|--|--|--|
|   |  | 09/839,18   | 36  | MEYERSON, MATTHEW L.  |             |  |  |  |  |  |
| Office Action Summary   |  | Examiner  | <u></u>   | Art Unit  |             |  |  |  |  |  |
|   |  | Marianne  | P. Allen  | 1631  |             |  |  |  |  |  |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply  |  |   |   |   |             |  |  |  |  |  |
| A SH<br>THE<br>- Exte<br>after<br>- If the<br>- If NC<br>- Failu<br>Any   | ORTENED STATUTORY PERIOD FOR REPL MAILING DATE OF THIS COMMUNICATION. nsions of time may be available under the provisions of 37 CFR 1.1 SIX (6) MONTHS from the mailing date of this communication. e period for reply specified above is less than thirty (30) days, a repl poeriod for reply is specified above, the maximum statutory period ree to reply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailined patent term adjustment. See 37 CFR 1.704(b).  | 136(a). In no even<br>ly within the statu<br>will apply and will<br>e, cause the appl | ent, however, may a reply be ti<br>utory minimum of thirty (30) da<br>Il expire SIX (6) MONTHS fror<br>lication to become ABANDON | imely filed  ays will be considered timely.  In the mailing date of this com  ED (35 U.S.C. § 133). | munication. |  |  |  |  |  |
| Status  |  |   |   |   |             |  |  |  |  |  |
|   | Responsive to communication(s) filed on <u>14 September 2004</u> .  This action is <b>FINAL</b> . 2b) This action is non-final.  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.   |   |   |   |             |  |  |  |  |  |
| Disposit  | ion of Claims  |   |   |   |             |  |  |  |  |  |
| 5)⊠<br>6)⊠<br>7)⊠   | Claim(s) 1-26,29-31,50,51,54-58 and 60-64 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  Claim(s) 1-4,7,11-22,25,26,50,51 and 54-57 is/are allowed.  Claim(s) 5,6,8,9,24,29-31,58 and 60-64 is/are rejected.  Claim(s) 10 and 23 is/are objected to.  Claim(s) are subject to restriction and/or election requirement.  |   |   |   |             |  |  |  |  |  |
| Applicat  | ion Papers   |   |   |   |             |  |  |  |  |  |
| 10)   | The specification is objected to by the Examine The drawing(s) filed on is/are: a) acc Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Examine The specification is objected to be specification. | cepted or b)<br>drawing(s) b<br>tion is require                                       | ne held in abeyance. See held in abeyance. See held if the drawing(s) is of   | ee 37 CFR 1.85(a).<br>bjected to. See 37 CFR  | ` '         |  |  |  |  |  |
| Priority (  | under 35 U.S.C. § 119  |   |   |   |             |  |  |  |  |  |
| <ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul> |  |   |   |   |             |  |  |  |  |  |
| 2) Notice 3) Information  | et(s) te of References Cited (PTO-892) te of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) ter No(s)/Mail Date   | )   | 4) Interview Summar Paper No(s)/Mail D 5) Notice of Informal 6) Other:  |   | 152)        |  |  |  |  |  |

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## **DETAILED ACTION**

## Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/14/04 has been entered.

Claims 1-26, 29-31, 50-51, 54-58, 60-64 are under consideration by the examiner.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

# Claim Objections

Claims 10 and 23 are objected to under 37 CFR 1.75 as being substantial duplicates of claims 3-4, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). In view of the present amendments, claims 3 and 10 appear to be identical in scope. Likewise, claims 4 and 23 appear to be identical in scope.

# Claim Rejections - 35 USC § 112

Claims 5-6, 8-9, 24, 29-31, and 62-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 5-6 recite limitations with respect to the type of candidate sequence found. These claims are confusing as claim 4 does not specify that the database of microbial sequence used for comparison be from a particular type of microbial organism (i.e. comparing said candidate sequence to a database of mutualistic microbial organism, parasitic microbial organism). See also claims 29-31.

Claim 8 recites that the microbe is an intracellular pathogen. This is confusing as it requires foreknowledge of the microbe before executing the method. Note that claims 1-3 do not require searching the candidate sequence against a microbial database of any kind. See also claims 62-64.

Claim 24 is confusing as it does not make clear if the database of microbial sequences includes viral sequences,

# Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 58 and 60-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Lincoln et al. (U.S. Patent No. 6,303,297).

Lincoln et al. discloses constructing databases from cDNA sequences. Databases from healthy and diseased tissues can be constructed. These databases can be used for diagnosis of infectious disease. A sample from a patient can be used to construct a cDNA library where the

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resulting sequences are put in a database. These sequences are compared against a database from an uninfected cDNA library database to identify foreign microorganismal sequences. Any sequences identified can be compared against databases for particular microorganisms in order to identify what the foreign microorganism might be. Editing the sequences to remove sequences such as repeat elements, poly A tail sequences, etc. are disclosed. Comparison of human sequences from a sample against a database of sequences for *B. burgdorferi*, the pathogen or infectious agent responsible for Lyme's disease is specifically disclosed. See at least abstract, figures, claims, columns 9-10, and Examples 2-4.

With respect to the "20 consecutive nucleotide" limitations in the claims, Lincoln et al. discloses preferred BLAST scores of greater than 250. See columns 14 and 19-22. According to the instant specification at page 8, this would meet this limitation.

The Lincoln et al. reference does not disclose searching against a database of genomic sequences to identify candidate microbial sequences in a host organism as required by independent claims 1, 2, 3, and 50.

# Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne P. Allen whose telephone number is 571-272-0712. The examiner can normally be reached on Monday-Thursday, 5:30 am - 1:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 571-272-0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

Marianne P. Allen

Marianne P. Allen

11/26/04

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